

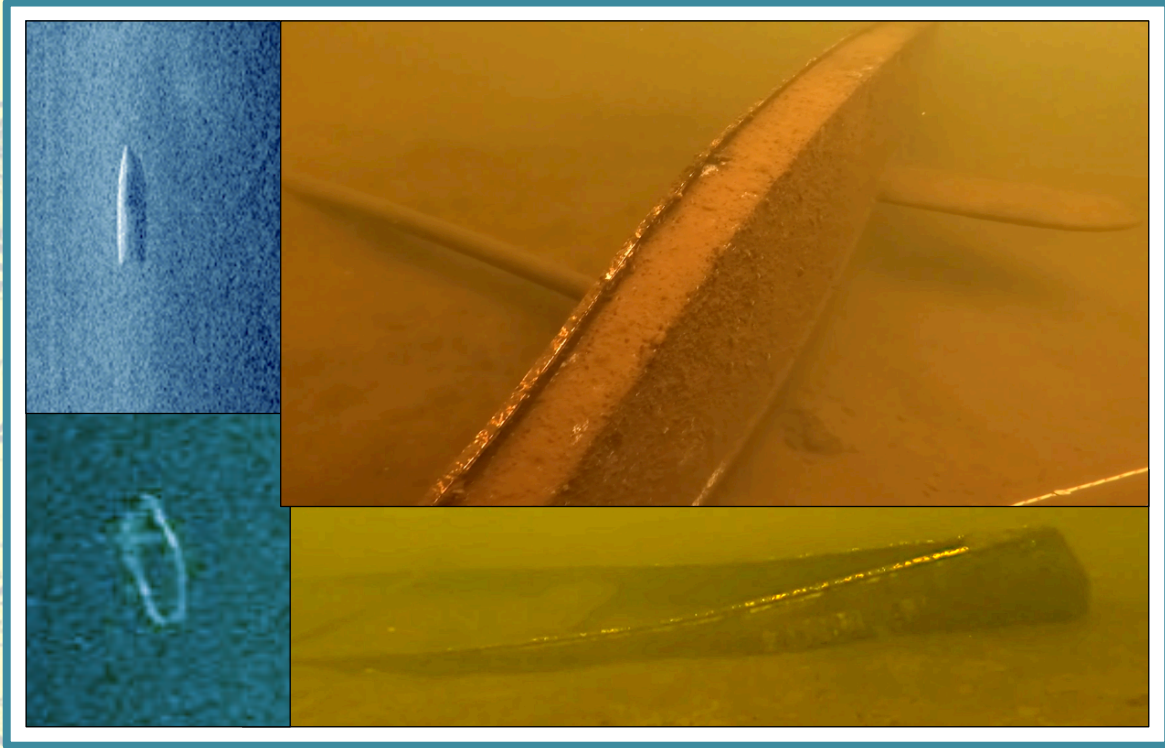


Ann Merriman
Christopher Olson
Minnesota Archaeological License 22-075



Minnesota Suburban Lakes Projects Series
Southern and West Metro Lakes Underwater Archaeology Project

Lake Minnewashta Underwater Archaeology Project Report



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Acknowledgments

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Maritime Heritage Minnesota



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MHM IS A 501.(c).3 NON-PROFIT CORPORATION DEDICATED TO THE DOCUMENTATION, CONSERVATION, AND PRESERVATION OF MINNESOTA'S FINITE MARITIME CULTURAL RESOURCES

“...grants have allowed a small St. Paul-based nonprofit, Maritime Heritage Minnesota (MHM), to re-establish the discipline of underwater archaeology in Minnesota. Without this support, MHM could not have conducted its groundbreaking nautical archeological and maritime historical research.”

~Steve Elliott, Former Minnesota Historical Society CEO and Director, January 2015

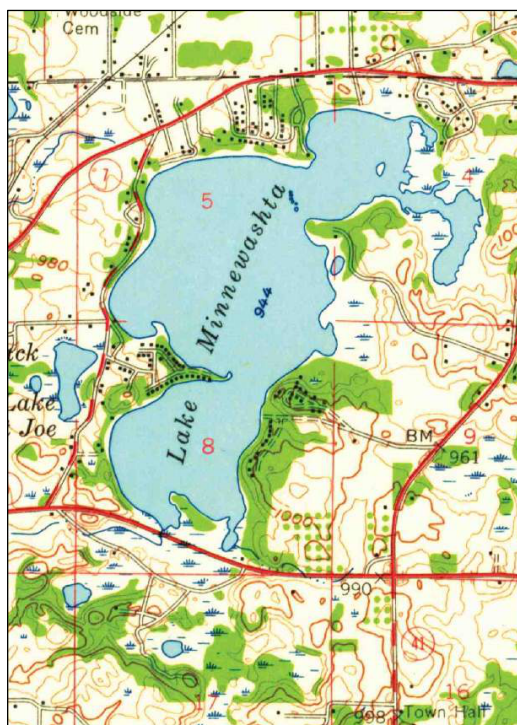
Introduction

Wrecks and the artifacts associated with them tell a story. Removing or otherwise disturbing artifacts, treating them as commodities that can be sold, obliterates that story. Nautical archaeological and maritime sites are finite, and are significant submerged cultural resources. Nautical, maritime, underwater, maritime terrestrial – Maritime Heritage Minnesota's (MHM) deals with all of these types of sites throughout the State of Minnesota. MHM's Mission is to document, conserve, preserve, and when necessary, excavate these finite cultural resources where the welfare of the artifact is paramount. MHM is concerned with protecting our underwater and maritime sites – our shared Maritime History – for their own benefit in order for all Minnesotans to gain the knowledge that can be obtained through their study. MHM's study of wrecks does not include the removal of artifacts or damaging the sites in any way. MHM does not raise wrecks or 'hunt' for 'treasure'. Submerged archaeological sites in Minnesota are subject to the same State statutes as terrestrial sites: the Minnesota Field Archaeology Act (1963), Minnesota Historic Sites Act (1965), the Minnesota Historic District Act (1971), and the Minnesota Private Cemeteries Act (1976) if human remains are associated with a submerged site. Further, the case of *State v. Bollenbach* (1954) and the Federal Abandoned Shipwrecks Act of 1987 provide additional jurisdictional considerations when determining State oversight and "ownership" of resources defined by law as archaeological sites (Marken, Ollendorf, Nunnally, and Anfinson 1997, 3-4). Therefore, just like terrestrial archaeologists working for the State or with contract firms, underwater archaeologists are required to have the necessary education, appropriate credentials, and hold valid licenses from the Office of the State Archaeologist (OSA).

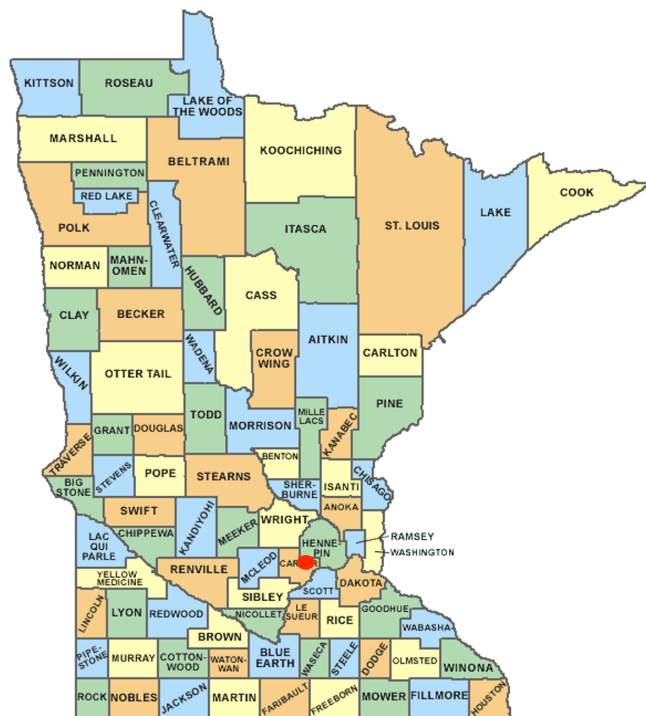
Research Design and Methodology

This project is a significant step toward the comprehensive identification, documentation, preservation, and conservation of submerged cultural resources in Minnesota. The Lake Minnewashta Underwater Archaeology Project (LMUA) in Carver County is part of the Southern and West Metro Lakes Underwater Archaeology Project (SWMLUA) that falls under the umbrella program, the Minnesota Suburban Lakes Survey Projects (MSLS). Crystal Lake in Dakota County, Lotus Lake in Carver County, and Scott County's Prior Lake were also investigated during the SWMLUA Project. The purpose of the LMUA Project as part of the SWMLUA Project is to increase the collective maritime archaeological and historical knowledge of Minnesotans through the analysis of anomalies recorded on the bottoms of our state's suburban lakes during side and down-imaging sonar surveys. The LMUA Project is a Phase 1 underwater archaeological diving reconnaissance survey designed to locate, identify, and rudimentarily document objects - wrecks and other sites - on the lake bottom.

Prior to the beginning of the SWMLUA Project, MHM located and identified watercraft wrecks on the bottom of smaller Minnesota suburban lakes including nearby Christmas Lake, Prior Lake, Medicine Lake, Lake Johanna, and Forest Lake. MHM has also identified and documented wrecks in larger lakes including Lake Minnetonka, White Bear Lake, and Lake Waconia. MHM recognized 19 anomalies on the lake bottom during the remote sensing survey of Lake Minnewashta in 2020. During the 2022 fieldwork season, MHM and its volunteers dove on 6 anomalies in the lake. MHM conducted the diving reconnaissance in Lake Minnewashta during 2 days of fieldwork; 1 day in early June and another in late July. MHM used its research boat, *Anomaly 51*, to pinpoint the dive locations using embedded GPS data collected during sonar recording review, and a weighted Diver Down Buoy was deployed at the proper coordinates. MHM's Underwater Archaeologists and Volunteers then descended to the lake bottom to locate and document the anomalies. Using data accumulated from the fieldwork as a starting point, MHM conducted research to place newly recognized nautical archaeological sites and anomalies into their historical contexts.



A map of Lake Minnewashta
(USGS 1958)



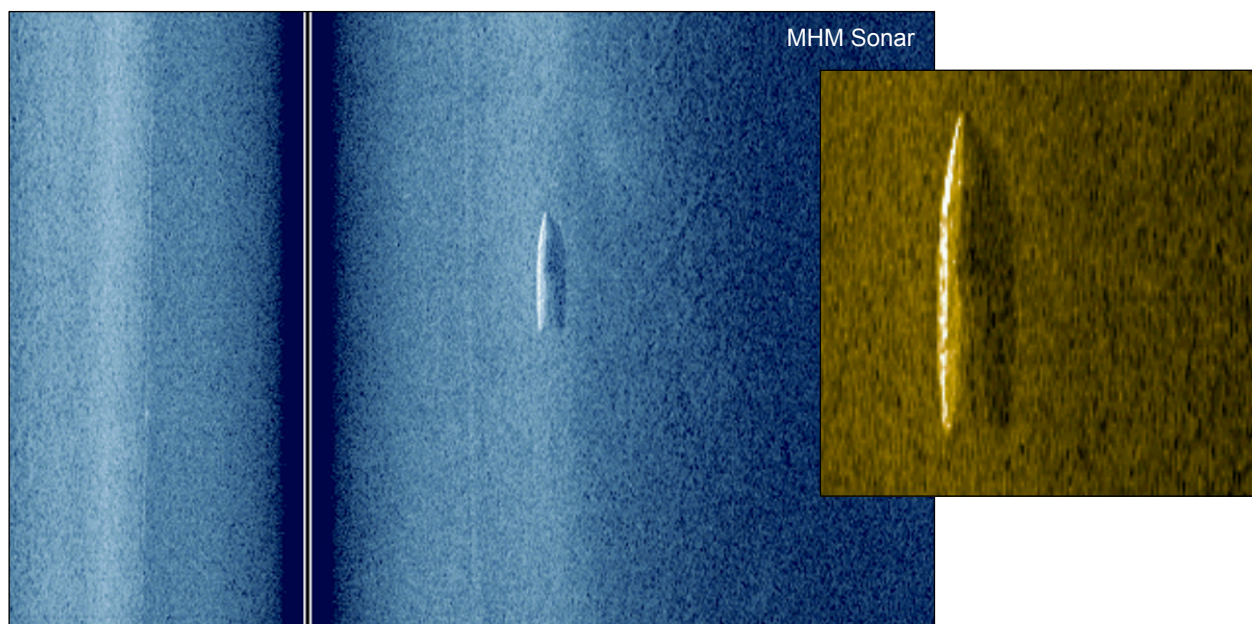
The red circle marks the location
of Lake Minnewashta in
Chanhassen in Carver County

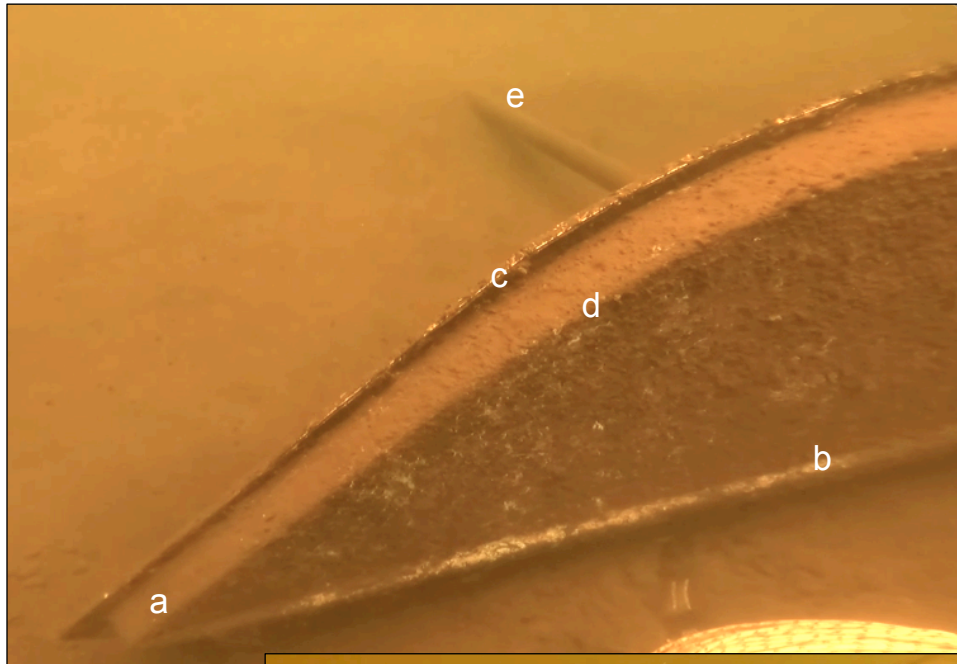
Results: Lake Minnewashta Underwater Archaeological Reconnaissance

After the completion of the LMUA/SWMLUA Project fieldwork in Lake Minnewashta in July 2022, there are now 2 identified wrecks on the lake bottom. Thirteen other anomalies have not been investigated yet and their sonar signatures indicate their documentation in the future may produce promising results. The anomalies were identified through underwater archaeological reconnaissance fieldwork using SCUBA, digital video, measured drawings, side and down-imaging sonar, and maritime historical research. The 2 identified wrecks in Lake Minnewashta did not attain Minnesota Archaeological Site Numbers at this time, and the 4 other anomalies investigated during the project - A3, A4, A15, A17 - were false targets comprised of bottom contours and weed clumps.

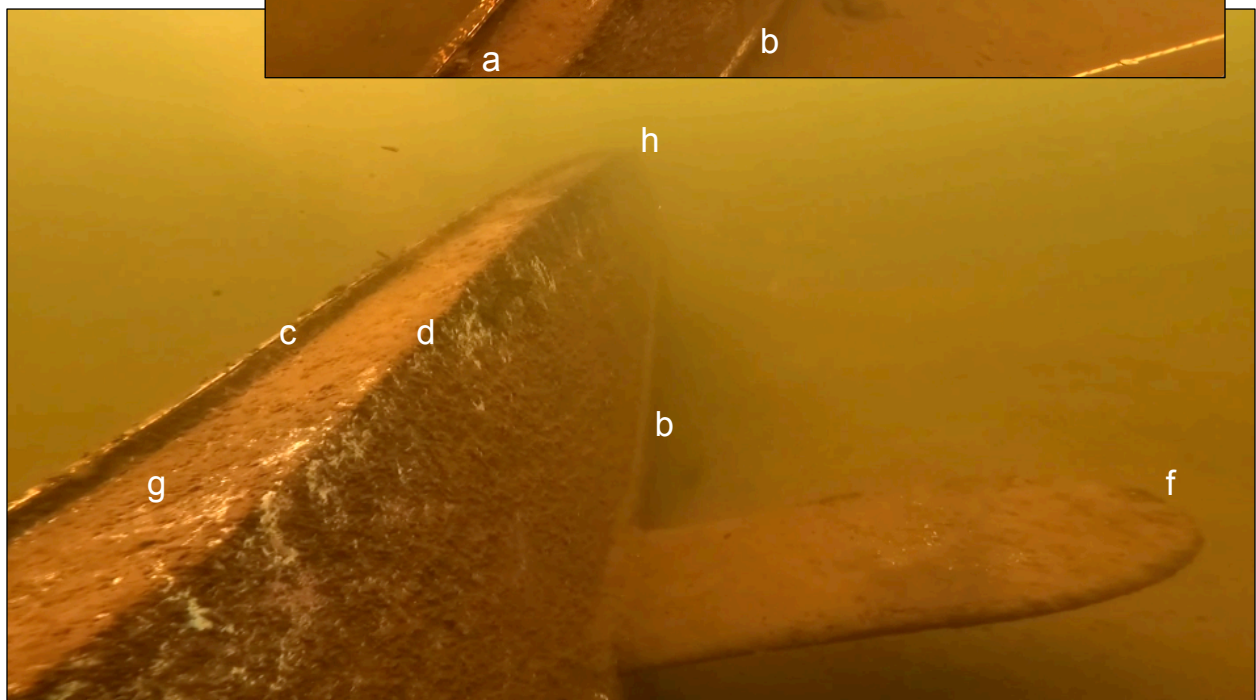
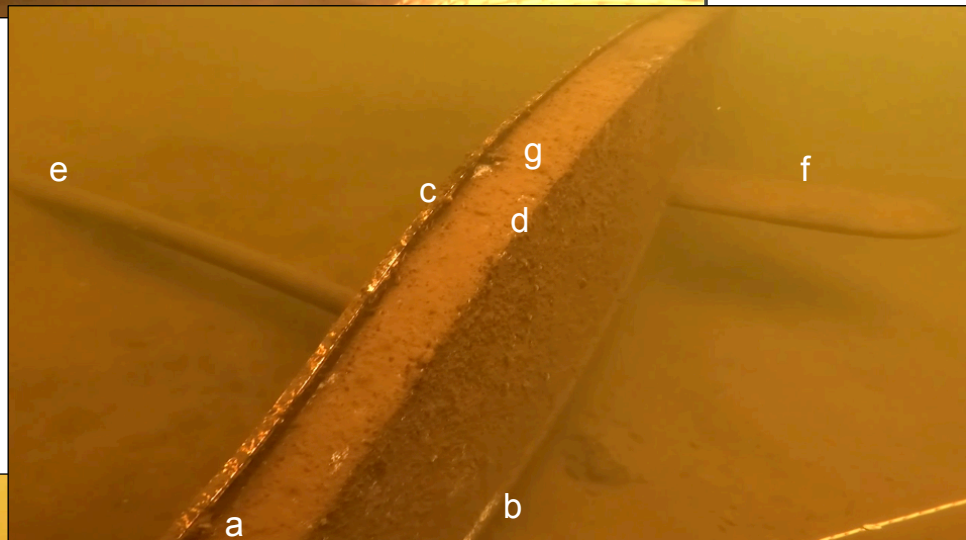
Fiberglass Drop Keel Sailboat Wreck, Anomaly 1

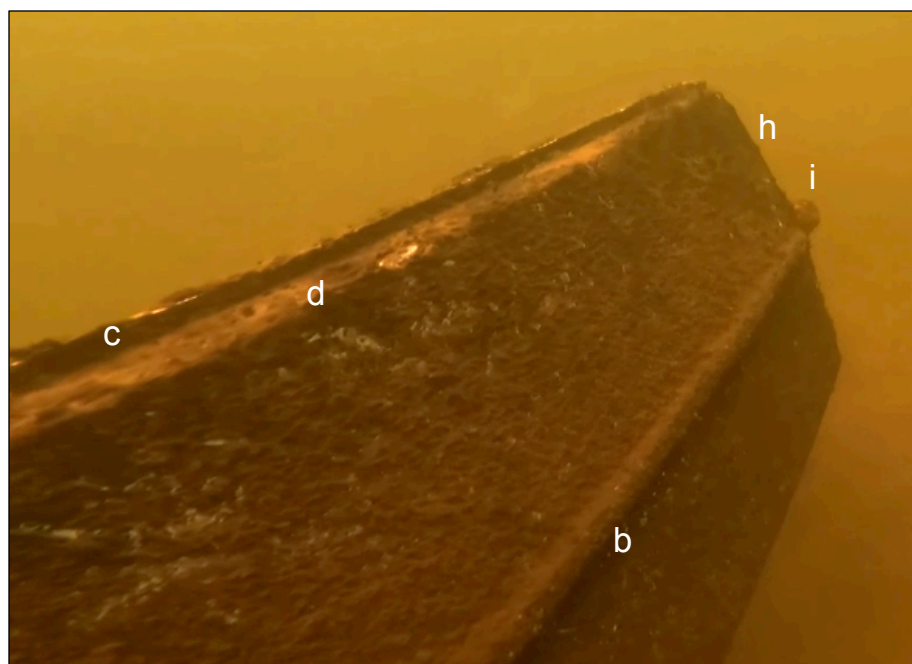
The nature of Anomaly 1's sonar signature suggested it was an overturned wooden boat. MHM dove on Anomaly 1 in June and July 2022 - with very good visibility. The wreck is laying on her side and is a Fiberglass Drop Keel Sailboat. Anomaly 1 is 14.50 feet long, 3.50 in the beam, 1.60 feet at the transom, and she has a .40 feet depth of hold. The bow is sharply pointed, the transom stern is square, and the wreck has a hard chine; the keel is clearly seen because of the wrecks' position. Additionally, the vessel's fin keel is completely exposed in the water column just a bit off the lake bottom. The gunwale is flush with the deck, and a small metal rubrail is attached to the hull at gunwale level. The wreck has a small cockpit just aft of the mast that is difficult to see clearly, along with deck coaming, long handrail, centerline cleat, a bow handle/cleat, and a gudgeon bracket; the rudder is missing. The 10-foot tall mast is still attached to the wreck and most of it is lying on the lake bottom. The Fiberglass Drop Keel Sailboat Wreck cannot be classified as a Minnesota Archaeological Site at this time due to a lack of information concerning her construction year and her sinking date. Anomaly 1 is an underwater resource under the protection of the Federal Abandoned Shipwreck Act of 1987 and 1954 Minnesota State Law.



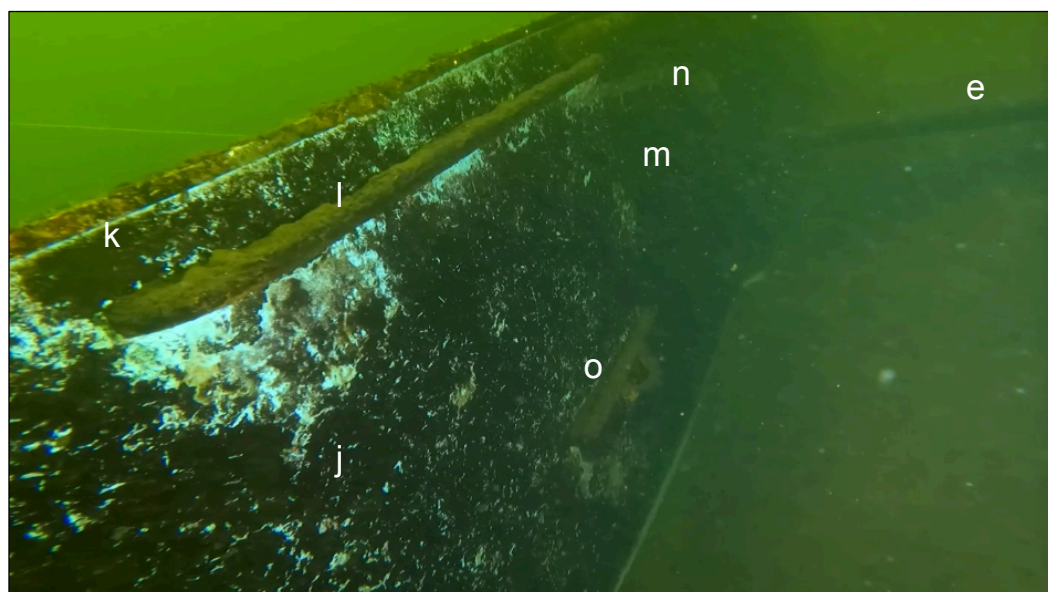
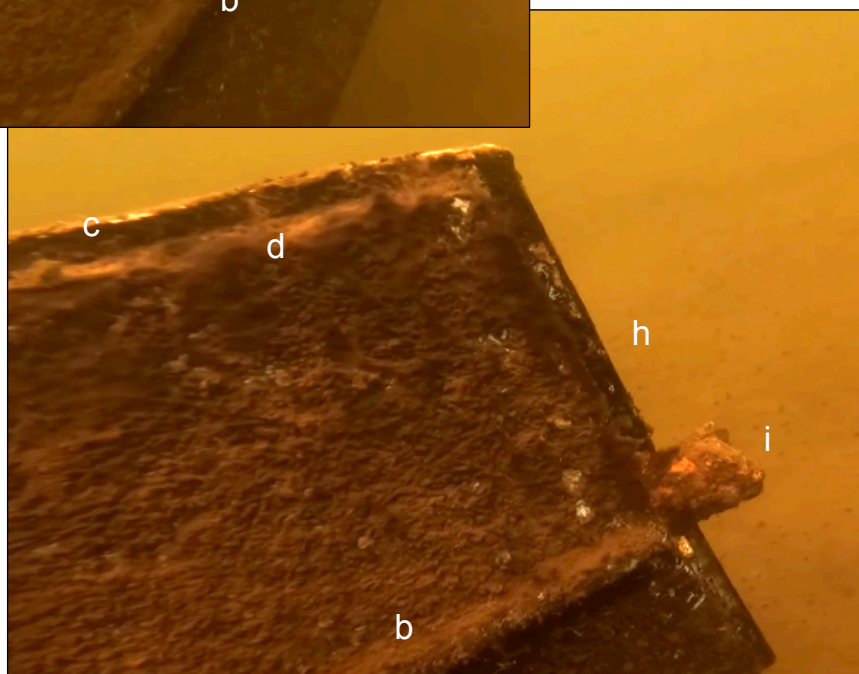


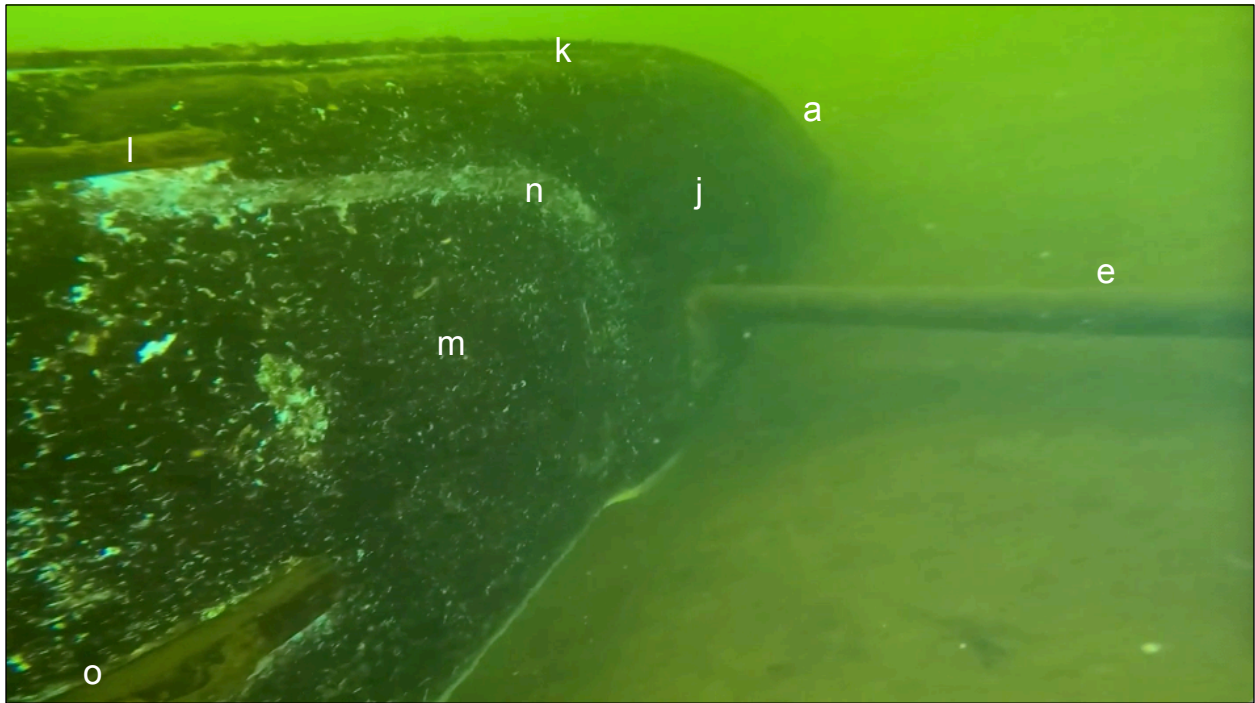
a: Port Bow
b: Keel
c: Rubrail
d: Hard Chine
e: Mast
f: Fin Keel
g: Port Amidships
h: Stern



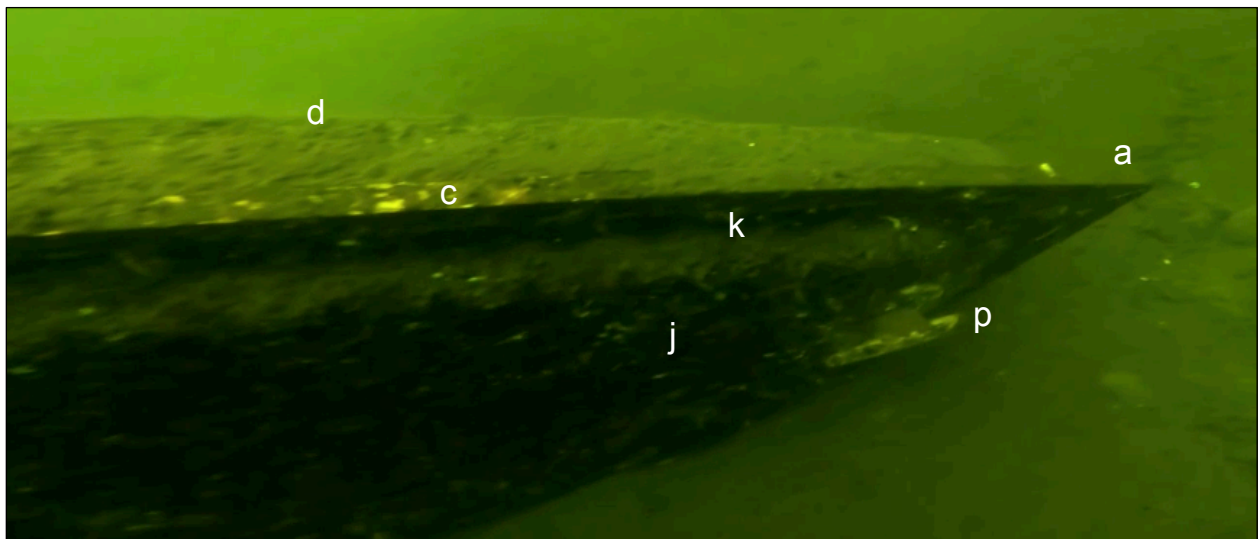


- b: Keel
- c: Rubrail
- d: Hard Chine
- e: Mast
- h: Stern
- i: Gudgeon Bracket
- j: Deck
- k: Gunwale
- l: Port Handrail
- m: Cockpit
- n: Coaming
- o: Centerline Cleat



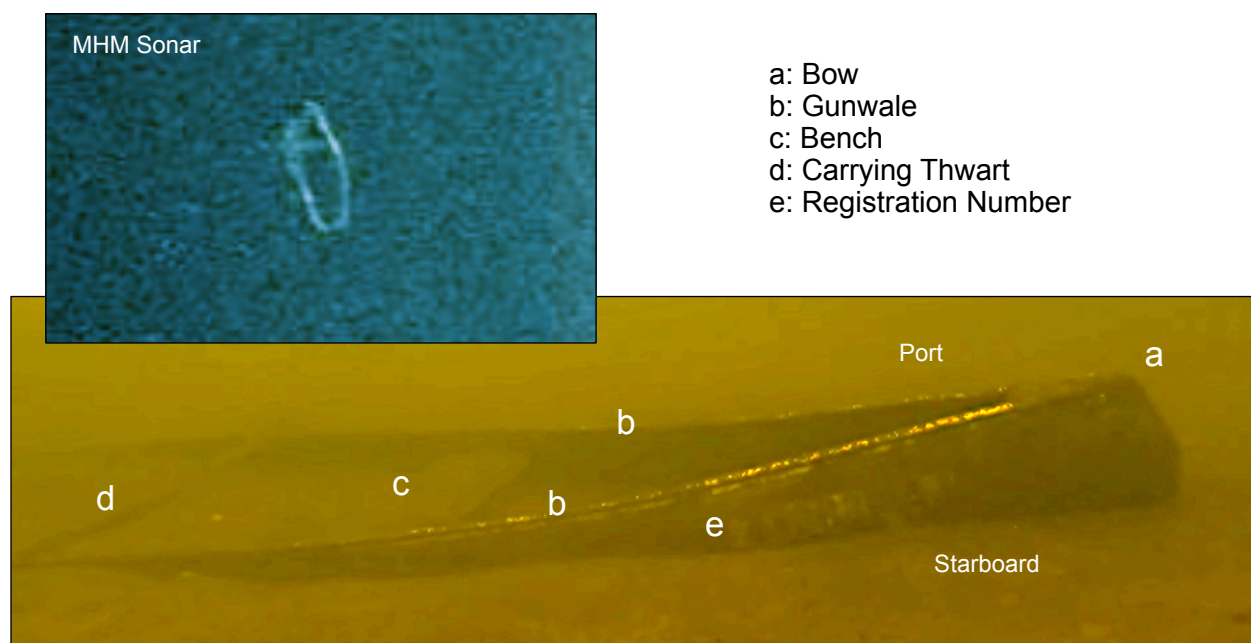


- a: Port Bow
- c: Rubrail
- d: Hard Chine
- e: Mast
- j: Deck
- k: Gunwale
- l: Port Handrail
- m: Cockpit
- n: Coaming
- o: Centerline Cleat
- p: Bow Cleat/Handle



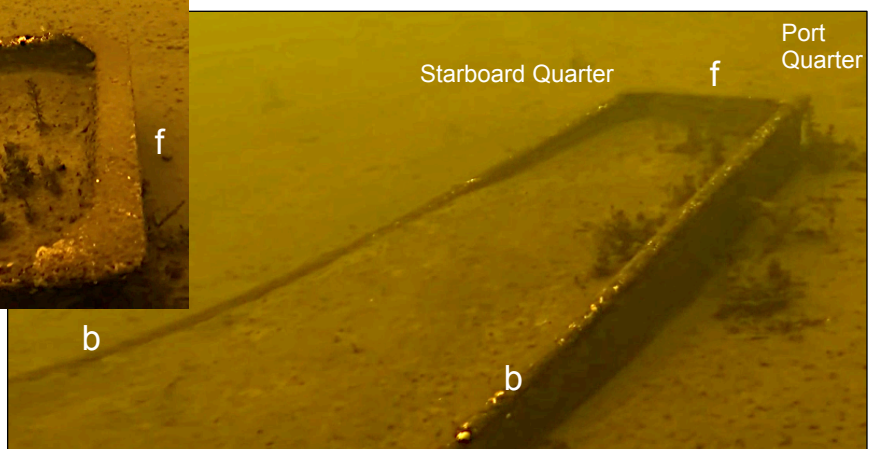
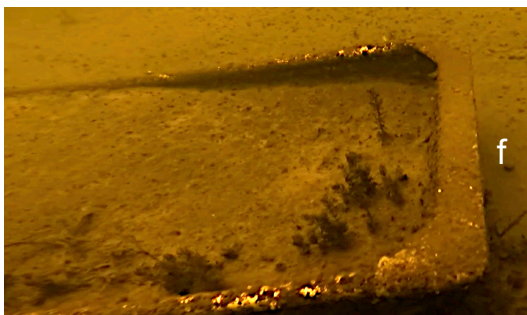
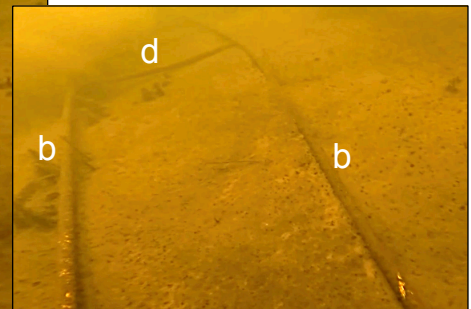
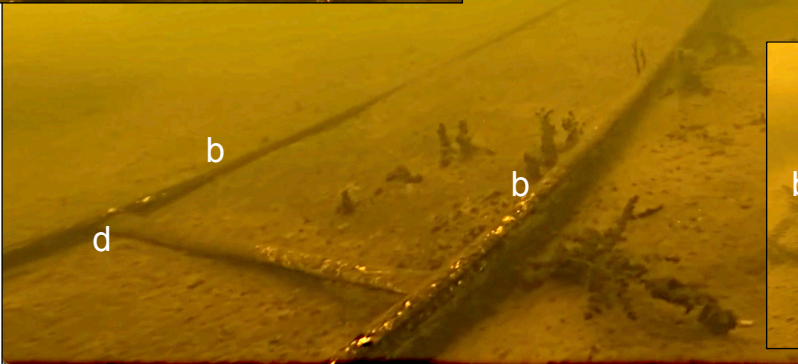
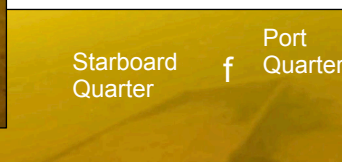
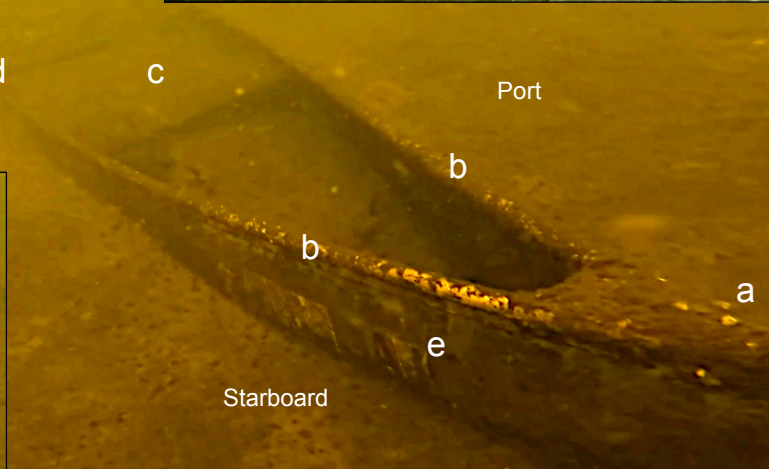
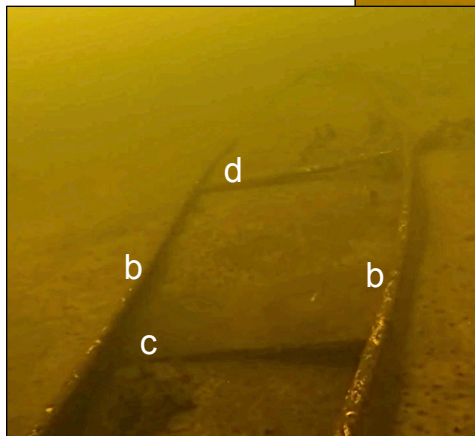
Aluminum Square Stern Canoe, Anomaly 5

Anomaly 5's sonar signature suggested it was a small boat with a square transom. Therefore, when MHM dove on Anomaly 5 in June 2022, while an aluminum square stern canoe was not expected, it was not a surprise. The Aluminum Square Stern Canoe site is 16.60 feet long, 3.00 in the beam, 1.60 feet at the transom. The bow is pointed with a rounded stempost and the transom stern is square and narrow. The port and starboard quarters at the transom are topped with aluminum castings that increased the vessel's rigidity. The gunwale is made from extruded aluminum and it is intact throughout the wreck. The hull is nearly filled with silt, but the forward bench and amidships carrying thwart are visible; the stern bench is buried. The wreck's registration number is MN 5083 AJ and its validation sticker is an orange state-shaped type from 1977-1978-1979. This registration number was not found in the Minnesota DNR records. However, the number and letter stickers on the hull are partially translucent and it is evidence that original registration for this canoe was MN 5083 AA. This number was found in the records, but it is linked to a 1960 14-foot Crestliner boat (Kong Moua, personal communication, June 2022), not a nearly 17-foot long canoe, and that number was retired in December 2003. MHM has encountered this issue several times in different suburban lakes in Minnesota. The AA and AJ sequences were both assigned to watercraft in 1959; a 1960 Crestliner cannot 'legally' carry a 1959 number. Therefore, it appears that while Anomaly 5 originally carried the AA sequence, at some point it 'unofficially' acquired a registration using the AJ sequence. Taking the AJ number would not have been difficult since the system was not computerized, nor were the numbers tracked by the DNR in a way that they could be researched at the time of the acquisition of a new validation sticker. Basically, more than one watercraft could carry the same number, even at the same time, without it being known. Therefore, it appears the mystery Crestliner was no longer used after 2003 and Anomaly 5 likely sank between 1977 and 1979. The Aluminum Square Stern Canoe Wreck cannot be classified as a Minnesota Archaeological Site at this time. However, Anomaly 5 is an underwater resource under the protection of the Federal Abandoned Shipwreck Act of 1987 and 1954 Minnesota State Law.





a: Bow
b: Gunwale
c: Bench
d: Carrying Thwart
e: Registration Number
f: Stern



Conclusion

MHM identified the first 2 wrecks on the bottom of Lake Minnewashta during the LMUA Project - the Fiberglass Fin Keel Sailboat Wreck (Anomaly 1) and the Aluminum Square Stern Canoe (Anomaly 5). The newly recognized wrecks offer significant and interesting data into the maritime history of the Lake Minnewashta area in terms of small unpowered watercraft use by west metro Minnesotans. The Fiberglass Fin Keel Sailboat Wreck is the first sailboat of this design identified by MHM in the lakes surveyed to date. Seven other sailboat wrecks, both made of fiberglass and wood, have been identified in Lake Minnetonka¹, Lake Johanna², and Crystal Lake³. All but one of these wrecks, the Fiberglass Scow Sailboat Wreck (Anomaly 688), could have not only served as personal pleasure craft, but as competitive racing sailboats; Anomaly 1 in Lake Minnewashta falls into this category as well. Additional dive reconnaissance on the Fiberglass Fin Keel Sailboat Wreck would be helpful to create a 3D model of the site because of the great water clarity. Video footage recorded of the wreck in 2022, while useful for documentation, proved to be inappropriate for underwater photogrammetry. Further, MHM would like to re-examine the exposed bow of the wreck to confirm if Anomaly 1 has a registration number affixed to her hull. The Aluminum Square Stern Canoe Wreck joins a group of 6 aluminum and fiberglass canoe wrecks in Lake Minnetonka⁴, White Bear Lake⁵, and Lake Pulaski⁶. Lake Minnewashta's Anomaly 5 is most similar in construction with Anomaly 12 in White Bear Lake. However, based on their construction attributes, Anomaly 5 was constructed years after WBL Anomaly 12, or was fabricated by a less-skilled boatwright.

As a whole, the SWMLUA Project produced interesting and significant results investigating 24 anomalies in 4 lakes in 3 counties using SCUBA. MHM dove upon and identified 11 wrecks, 2 maritime sites, and 4 'other' objects in Lake Minnewashta, Lotus Lake, Prior Lake, and Crystal Lake. Of the 11 wrecks, MHM acquired Minnesota Archaeological Site Numbers for 7 of them: 3 in Lotus Lake, 1 in Prior Lake, and 3 in Crystal Lake. The documentation of these sites and similar wrecks in the future will provide historians and scholars with opportunities to further study, explain, and analyze these protected submerged cultural resources. The wrecking processes responsible for the creation of Minnesota's submerged cultural resources have produced a variety of underwater sites. Identifying, comparing, and associating these new sites in Lake Minnewashta, Lotus Lake, Prior Lake, and Crystal Lake, along with known sites increases our understanding of the historical context within which these cultural resources operated or were exploited by Minnesotans. Future studies will greatly enhance our shared maritime history through the recognition of submerged cultural resources and the stories behind their construction and disposition. The diversity of

¹Wooden Sloop Wreck (21-HE-486), Wooden C-Scow Wreck (21-HE-559), Fiberglass Sailboat Wreck (Anomaly 595), Fiberglass Scow Sailboat Wreck (Anomaly 688), Fiberglass Sailboat Wreck 2 (Anomaly 856), Merriman and Olson 2015b, 4-6; Merriman and Olson 2016, 32; Merriman and Olson 2018, 29-30; Merriman and Olson 2022, 20-33, 56

²Capsized Fiberglass Catamaran Wreck (Anomaly 29), Merriman and Olson 2019a, 8

³Starcraft Skylark Wreck (Anomaly 1), Merriman and Olson 2023, 20-21

⁴Aluminum Canoe Wreck (Anomaly 12), Sea King Canoe Wreck (Anomaly 107), Half Canoe Wreck (Anomaly 500), Forester Shagawa Canoe Wreck (Anomaly 694), Merriman and Olson 2013, 44-46; Merriman and Olson 2014a, 31-32; Merriman and Olson 2015a, 26, Merriman and Olson 2017, 33-35

⁵Aluminum Square Stern Canoe Wreck (Anomaly 12), Merriman and Olson 2014b, 18-21

⁶Red CTD-17 Core Craft Fiberglass Canoe Wreck (Anomaly 51), Merriman and Olson 2019b, 7-8

nautical, maritime, and underwater sites so far identified by MHM in Minnesota's lakes are tangible examples of the rich maritime history of the area.

MHM continues to re-examine recorded sonar footage from completed remote sensing surveys. Targeted re-scanning has occurred in several lakes using knowledge gained from the comparison of anomalies that have proven to be wrecks or other submerged cultural resources in past projects. With improved technology, future scanning projects will produce clearer data. The results of the SWMLUA Project summarized above is connected to all the work that came before and will come after its completion. At this point, watercraft located in Minnesota's suburban lakes represent approximately 1,000 years of Minnesota's maritime history and nautical archaeology. In the historic period, the known wrecks represented in these lakes span around 150 years of local maritime culture. It is clear – even through this Phase 1 pre-disturbance nautical archaeological investigation – that the types of sites that exist in Minnesota's suburban lakes documented to date are diverse, archaeologically and historically significant, and worthy of great attention. Through research, diving on wrecks and anomalies to collect pertinent data, and ensuring that the collected information is accessible by the public, MHM will continue to investigate Minnesota's submerged cultural resources into the future.

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